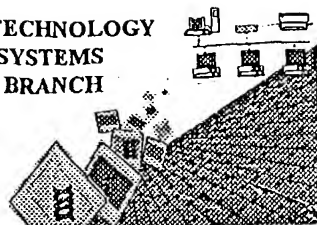


BIOTECHNOLOGY  
SYSTEMS  
BRANCH



**RAW SEQUENCE LISTING**  
**ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/621911  
Source: IFWO  
Date Processed by STIC: 8/20/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

**TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER**  
**VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND**  
**TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:**

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box-1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):  
U.S. Patent and Trademark Office, 220 20<sup>th</sup> Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202

Revised 05/17/04

## Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/621,911
ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE		
1 _____ Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."	
2 _____ Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.	
3 _____ Misaligned Amino Numbering	The numbering under each 5 <sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.	
4 _____ Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.	
5 _____ Variable Length	Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.	
6 _____ PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.	
7 _____ Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) _____ SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped  Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.	
8 _____ Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000	
9 _____ Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.	
10 _____ Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence	
11 _____ Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)	
12 _____ PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.	
13 _____ Misuse of n/Xaa	"n" can only represent a single <u>nucleotide</u> ; "Xaa" can only represent a single <u>amino acid</u>	



IFWO

## RAW SEQUENCE LISTING

DATE: 08/20/2004

PATENT APPLICATION: US/10/621,911

TIME: 11:03:31

Input Set : A:\PTO.LM.txt

Output Set: N:\CRF4\08202004\J621911.raw

3 <110> APPLICANT: SAITOU, Mitinori  
 4 SURANI, Azim  
 6 <120> TITLE OF INVENTION: Genes  
 8 <130> FILE REFERENCE: 674558-2002  
 10 <140> CURRENT APPLICATION NUMBER: 10/621,911  
 11 <141> CURRENT FILING DATE: 2003-07-17  
 13 <150> PRIOR APPLICATION NUMBER: PCT/GB02/00215  
 14 <151> PRIOR FILING DATE: 2002-01-18  
 16 <150> PRIOR APPLICATION NUMBER: GB 0101300.2  
 17 <151> PRIOR FILING DATE: 2001-01-18  
 19 <160> NUMBER OF SEQ ID NOS: 26  
 21 <170> SOFTWARE: SeqWin99, version 1.02

*IMPORTANT! see item 4  
 on Error  
 Summary  
 sheet*  
**Does Not Comply  
 Corrected Diskette Needed**

## ERRORED SEQUENCES

95 <210> SEQ ID NO: 4  
 96 <211> LENGTH: 150  
 97 <212> TYPE: PRT  
 98 <213> ORGANISM: Mus musculus  
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 102 1 5 10 15  
 104 Pro Gln Lys Lys Asp Glu Glu Asp Ala Leu Asp Asp Thr Asp Val Leu  
 105 20 25 30  
 107 Gln Pro Glu Thr Leu Val Lys Val Met Lys Lys Leu Thr Leu Asn Pro  
 108 35 40 45  
 110 Gly Val Lys Arg Ser Ala Arg Arg Arg Ser Leu Arg Asn Arg Ile Ala  
 111 50 55 60  
 113 Ala Val Pro Val Glu Asn Lys Ser Glu Lys Ile Arg Arg Glu Val Gln  
 114 65 70 75 80  
 116 Ser Ala Phe Pro Lys Arg Arg Val Arg Thr Leu Leu Ser Val Leu Lys  
 117 85 90 95  
 119 Asp Pro Ile Ala Lys Met Arg Arg Leu Val Arg Ile Glu Gln Arg Gln  
 120 100 105 110  
 122 Lys Arg Leu Glu Gly Asn Glu Phe Glu Arg Asp Ser Glu Pro Phe Arg  
 123 115 120 125  
 125 Cys Leu Cys Thr Phe Cys His Tyr Gln Arg Trp Asp Pro Ser Glu Asn  
 126 130 135 140  
 128 Ala Lys Ile Gly Lys Asn  
 E--> 129 145 150 150 misaligned amino acid numbers - see item 3 on Error  
 253 <210> SEQ ID NO: 7  
 254 <211> LENGTH: 7656

*pp 4, 5, 6*

*Summary sheet*

## RAW SEQUENCE LISTING

DATE: 08/20/2004

PATENT APPLICATION: US/10/621,911

TIME: 11:03:31

Input Set : A:\PTO.LM.txt

Output Set: N:\CRF4\08202004\J621911.raw

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256 &lt;213&gt; ORGANISM: Rattus sp

258 &lt;400&gt; SEQUENCE: 7

P.4

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271 gcctataaag aatgctagga ttatataggt acaaaatcac acctggctgt taaggttttt 780
272 ctggctgttt tttttttcac ccccatgaat gattttgaaa atagttgagc tgtttacatt 840
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274 aatactgagt tatttttata gcttttctat ttttgtttta aattttatatt tttccttttt 960
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## RAW SEQUENCE LISTING

DATE: 08/20/2004

PATENT APPLICATION: US/10/621,911

TIME: 11:03:31

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Output Set: N:\CRF4\08202004\J621911.raw

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## RAW SEQUENCE LISTING

DATE: 08/20/2004

PATENT APPLICATION: US/10/621,911

TIME: 11:03:31

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393 &lt;400&gt; SEQUENCE: 8

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See  
error  
explanation  
on  
p.6

## RAW SEQUENCE LISTING

DATE: 08/20/2004

PATENT APPLICATION: US/10/621,911

TIME: 11:03:31

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408 gcttctattg ctgtgataaa gattacgacc gaggtcttct caaagactaa gcagttttgt 900  
409 ttgcagctag tttttgaggc ttctgcccac caccatggag gagccattag agaaatcgac 960  
410 ccagttgtgg acccagaaac tcctcagacg aaagatgaaa aggacgcac cgtgattca 1020  
411 gaagtcgtaa gccagaaaca ctagttaaagg tcatgaaaac gctagccctg aaccccagtg 1080  
412 ccaagcggtc agcacatcgt cgcagcctcc gtctccggat tcagagaaga cctgtggaga 1140  
413 acagaagtga aagaatttct agggaaagttc aaagcgcttt acccaagaga aggggtccga 1200  
414 cgttggtgtc ggtgctgaga gatcctatag caaggatgag aagacttggt gggattgagc 1260  
415 agagacaaca caggctggaa ggaaatgagt agaaacggaa gagtgtgcca ttcagactca 1320  
416 ctgtgcttct tgccattatc agagacggga tccgtctgag aacgctaaaa tcgggaagca 1380  
417 ttaggacagc ttagattgta cactgtcctt gtgttaatga tgccatgcag cagacctgaa 1440  
418 agctggcttt tgctttttta gattaacctt ttctggtgc tggggactct tctaacttgt 1500  
419 taacctttta attatatagg gtgcgtgatg tttggattca tgtaatgac ttaaatttac 1560  
420 ccaaagaatt gagaaggagt caaagcattc tgtgaatttt tgaagcctca agcccggggc 1620  
421 cgagaaacia tgtaataga atttggaata gtttggttta gaaggaatt gggatagac 1680  
422 tctgaatttt ctagtgtgca aaaacaaaaa caaaaaaaa gactaaaaaa acaactgggg 1740  
423 aggagtaagg ttatttcagc ctccatgtct tgatcccagt ccatcatgaa aggaagtcat 1800  
424 gacaggaact caagtcagga ccgtggaagt aggtagcatc tgaagcagag acttctggga 1860  
425 tgaaagcgt gcttctgac tcgctcccca caaattgggc cctgagcctt cttgtccacc 1920  
426 ctcgaccccc ttgcctaggg ttggcaccac ccacaatggg ctgagccttc ccatgtcaat 1980  
427 cactaattaa gaaaatgctg tacagcgttg cctacaaacc agtcttaagg aggcgttttc 2040  
428 tccattgtgg ctctctcttc tctgataact ctagcttggt tcaaattgac aaccaaccag 2100  
E--> 429 ccagcacaca aacantttaa aagatagaaa taatgttagt gnnntcncatc gagcaagagt 2160  
430 c 2161

see p. 6

VARIABLE LOCATION SUMMARY

DATE: 08/20/2004

PATENT APPLICATION: US/10/621,911

TIME: 11:03:32

Input Set : A:\PTO.LM.txt

Output Set: N:\CRF4\08202004\J621911.raw

*error explanation*

Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of <220> to <223> is MANDATORY if n's or Xaa's are present.

in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:7; N Pos. 7471,7554,7608

Seq#:8; N Pos. 2115,2142,2143,2146



## VERIFICATION SUMMARY

DATE: 08/20/2004

PATENT APPLICATION: US/10/621,911

TIME: 11:03:32

Input Set : A:\PTO.LM.txt

Output Set: N:\CRF4\08202004\J621911.raw

L:129 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:4  
L:383 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:7  
L:384 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:7  
L:385 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:7  
L:429 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:8